Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The Review of Economic Statistics

PREL. VOL. IV JUNE, 1922 SUPPLEMENT 2

AN INDEX OF BRITISH ECONOMIC CONDITIONS 1919-22

Prepared at the London School of Economics and Political Science

COMMUNICATED BY

ARTHUR L. BOWLEY, SC.D., PROFESSOR OF STATISTICS IN THE UNIVERSITY OF LONDON

THE Index of Economic Conditions in the United Kingdom has developed from a proposition made in the autumn of 1920 by Professor C. Ottolenghi of Turin; he suggested that a statistical "observatory" should be established to study economic movements with headquarters in London and "observers" in various countries. The proposition was considered at the London School of Economics and Political Science by a small group of statisticians and business men, and it was decided to examine its possibilities in the Statistical Department of that School. During 1921 the information relevant to such an undertaking both in the twenty years before the war and in 1919 and 1920 was examined, and with the help of experts in finance, industry, and statistics, certain series were selected. These series satisfied for the post-war period the conditions, that their readings could be obtained monthly (with one or two exceptions where quarterly readings only were available), that they were compiled on adequate authority, that their method of compilation appeared not to be subject to change, and that they were relevant and not redundant. The work of choosing the series and of investigating their relationship to each other was completed (in a preliminary but sufficient way) in 1921. Nothing has yet been settled on the question of the constitution of a European observatory, but when an arrangement was made with the *Manchester Guardian* to publish the results for six months in its supplements entitled "European Reconstruction Numbers," Professor Ottolenghi for Italy and distinguished statisticians in France, Germany, and Belgium accepted invitations to contribute studies on economic conditions in those countries. Finally at the beginning of 1922 a conference took place between representatives of statistics and economics in the Universities of Harvard, London, and Cambridge (England), as the result of which it is hoped that close coöperation will be maintained in the general study of the statistical aspects of economic and industrial changes.

The purpose of this article is to elucidate the method and construction of the British "Index," whose readings are published in this REVIEW. So far as pre-war conditions are concerned, it need only be remarked that the series studied by Professor Persons, and discussed in "An Index of British Economic Conditions, 1903–14," also published in this REVIEW on pages 158 ff., cover the same ground as, and are in many cases identical with, those considered last year at the School of Economics.[1] No good purpose would be served by duplicating the work, especially as for various reasons the post-war selection is different from the pre-war, and here only the post-war study is discussed. Both in matter and in form the existing presentation is tentative, and when its continued publication is arranged it may be modified as the result of technical experience, of greater freedom in choice of method of presentation, and of criticisms from persons who are interested in it.

It is at once evident that we have been greatly influenced by the work of the Harvard Committee and indeed it is believed that there is no difference of principle between the new and the older study. We have, however, made a complete break with the pre-war series and are not yet prepared to assert that even the sequence of the movements of the various series observed in the period 1895–1913 will be preserved without substantial modification in the future; in the inflation of 1919–20 and the depression of 1921–22 influences were at work with which nothing in recent decades is comparable.

---

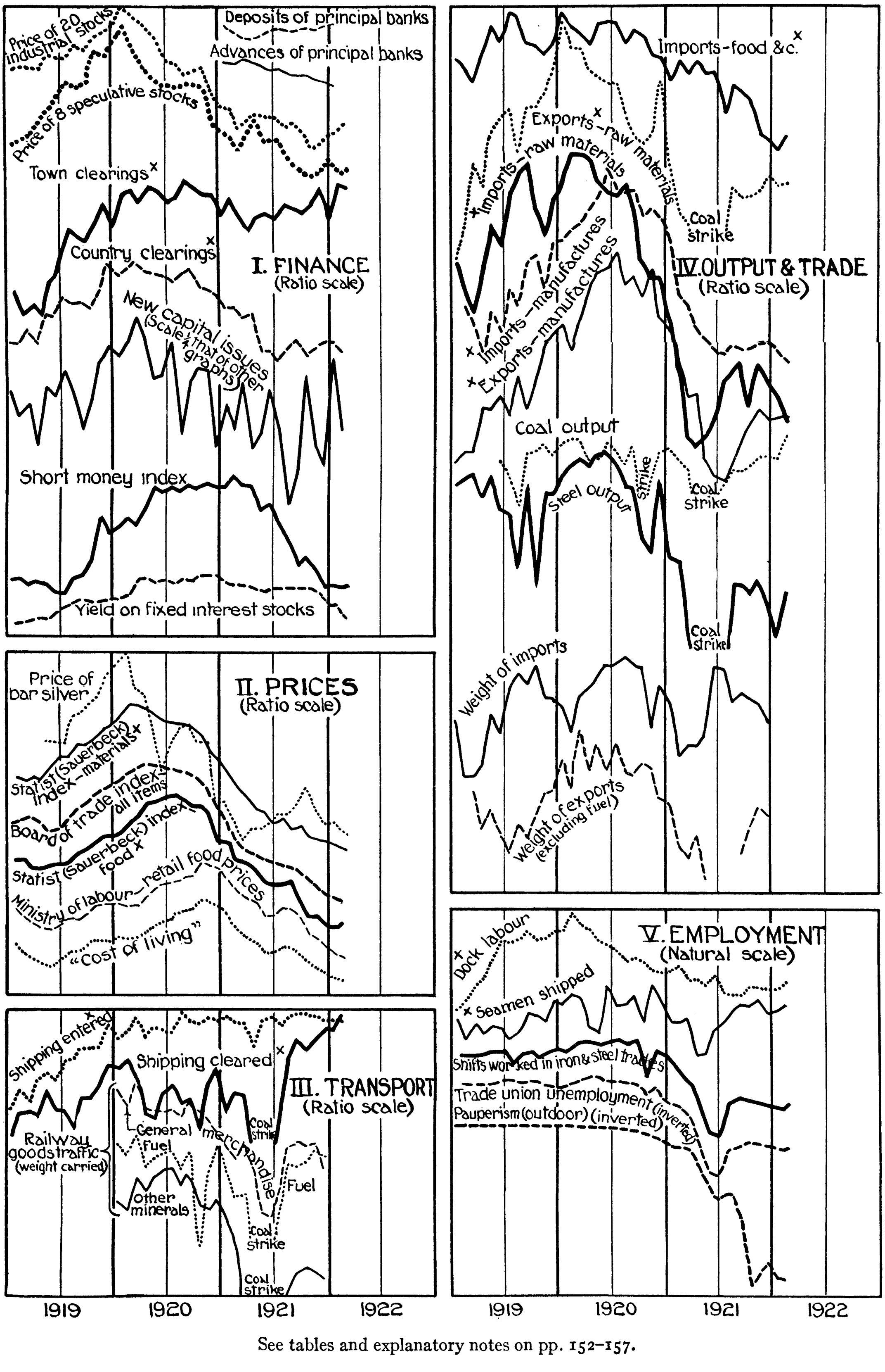
[1] A very much slighter study of this period, made just before Professor Persons' work was to hand, is to be found in the *Manchester Guardian*, Supplement of May 18th; there it can be seen how closely the selections of series correspond.

The monthly readings have been expressed, where possible and advisable, as percentages of the average level of 1913 or of July 1914. Though in fact the conditions in the year before the war were not stationary, yet the changes in (say) 1911–14 were so small in comparison with recent movements that in retrospect people regard pre-war rates and prices as normal and continually make comparisons therewith. These percentages, or the original numbers, are printed *in extenso* in the tables for every month from January 1919 or from the first date for which records exist. With them are given in adjacent columns percentages corrected for seasonal variation, when this variation was important and could be calculated; the method of calculation was very similar to that developed by Professor Persons and familiar to readers of this REVIEW, but slight variations and adaptations of this general method were in some cases necessary. The figures thus corrected for seasonal variation were used in the charts. The series are classified in five groups, Finance, Prices and Wages, Transport, Output and Trade, and Employment; this grouping appears to be natural and convenient for comparison and reference, and suitable for descriptive purposes, but it is not to be expected that it will correspond with organic relationship in the development of a crisis or a recovery in the way in which the Harvard groups A, B, and C are related. Some of the series are themselves the results of averaging, but in no case are the series averaged together. The result of averaging is to remove individual small fluctuations and its intention is to show the result of common or major movements; we have not thought that in any of the cases considered the series were sufficiently homogeneous to make the process legitimate, or sufficiently numerous to result in a useful elimination of the unessential.

The presentation of the series is in two parts. In the second part (opposite page) five charts are given, each showing the more important series in one group. For the first four groups the ratio scale is used. This scale needs, perhaps, less justification in America, where its use has been the subject of organized propaganda, than in England; but even here it has in recent times come into less restricted use. We have used it for several reasons: first, there is no simple method of bringing together series expressed in different units; secondly, the fluctuations are so violent that a chart on the natural scale would be unwieldy; thirdly, it is the ratios, not the absolute differences, that are commonly of interest; fourthly, it does not give rise to many of the misconceptions that may be implicit in charts on the natural scale. The purpose of these charts is to show the dates of maxima and minima and the trends and fluctuations of the individual series, and also to exhibit resemblances and differences between (or among) two or more series. For this purpose no numerical scale marking is necessary, no single scale is possible and multiple markings are confusing; we have therefore taken the simple course of inserting no numerical scale at all. The actual numbers are in the tables immediately under the charts. For the fifth group the chart is on the natural scale; here in most cases the fluctuations are so slight that little difference would be shown if ratios instead of numbers were graphed, and indeed on the scale of half an inch vertically to 25 per cent increase used throughout the first four graphs the fluctuations would hardly be visible, and in the cases of "changes in number of shifts worked" and of "seamen shipped" no definite base is available.

The first part (see frontispiece) is intended to give a single view of economic changes since the war, and to be comparable with the Harvard Index Chart. The numbers are represented on the natural scale as percentages of their level in 1913. Four series have been selected, each as the most typical example of one set of phenomena. The index of wholesale prices is taken as marking the phase of the commercial cycle, as the basic series with whose movements those of all others are compared. For the actual course of business the value of exported manufactures of British produce is selected; this is believed to be the best single indication of the condition of trade; if we took exports as a whole, the main alteration would be the inclusion of coal, whose price and

GROUPS OF BRITISH SERIES



See tables and explanatory notes on pp. 152–157.

quantity fluctuate apart from general conditions; the production of pig-iron is possible as a general index, but it is perhaps anticipatory rather than typical of current general business. The relation of production for export to production in general is no doubt not the same in the disturbed condition of Europe as it was before the war, but it is perhaps now even more significant of the industrial situation. We have selected the series depending on the price of industrial stocks as showing the market's anticipation of profit; on the whole this series is on a wider basis than that of speculative stocks, though the latter might be expected to be more sensitive to optimistic or pessimistic feelings; since the autumn of 1919 these two series have moved so closely together that it is indifferent which is adopted. For money we take the "short money index" described below.

It remains to exhibit in more detail the nature and origin of the 47 series used for showing the general condition of finance and industry.

I. FINANCE

Twenty companies long established, of good standing and with considerable capital were selected, their stock-exchange prices (corrected for any bonus issues, changes of conditions, etc.) expressed as percentages of pre-war prices, and averaged. Since so many securities change from time to time by bonus shares, and since other methods and the very general totals hitherto published are heterogeneous and not strictly comparable, it is believed that a more trustworthy result is obtained by the choice of a small number of securities whose comparability can be closely watched. These industrial stocks are of companies operating principally, if not solely, in the United Kingdom.

To obtain a further view of the market's feeling from a different aspect eight other securities were selected of companies whose shares are traded in London but whose field of operation is abroad, companies whose profits are liable to fluctuations and which involve a greater element of speculation than do the first group. Those selected are Burmah Oil, Shell Transport, Anglo-Dutch Plantations, Lingghi Plantations, Rio Tinto, de Beers Deferred, British South Africa, and Marconi Wireless Telegraph.

Statements of new capital issues in London are now obtainable monthly and appear to lead to a coherent series whose movements are specially symptomatic, but the fluctuations are rapid and considerable and more experience is needed before the series can be safely used in forecasts.

The "short money" index employed is obtained by averaging the Bank of England rate of discount, other banks' rate of interest on deposits (which of course moves step by step with the former), and the market rates for day by day money and for three months bank bills. This is the only case where unlike things are averaged together and the method is adopted because the market rates fluctuate rapidly from temporary causes, while the bank rates move seldom and by definite steps; the deliberation of the one is used to balance the excitability of the other.

The value of securities bearing a fixed rate of interest moves inversely with, but not so violently as, the price of money in the money market. Four examples are taken of such securities, viz., 4 per cent Funding Loan, 3 per cent Loans, 3 per cent Metropolitan Water Board (B Stock), and 3½ per cent London County Council Consolidated; these are combined together, and the movement of the yield of £100 invested is exhibited in a series.

The supply of money for investment cannot be exactly indicated; but to enable some judgment to be formed, the amounts of private deposits in the Bank of England and of deposits in the nine principal banks are shown. The totals of advances made by the latter are also given.

Three series are obtained from bankers' clearing houses. The first, the town cheques cleared in London, reflect principally the sale of securities and therefore the activity of investment. The second, country cheques cleared in London, and the third, clearings in five important provincial towns, are believed to consist principally of payments for goods, and therefore should reflect the actual condition of industry; but further study is needed before the exact significance of their movements is known.

Finally the exchange of New York on London is exhibited.

In all the series in this group (except new capital issues) the numbers can be obtained in any week and the results be always up to date. In most of the series in the other groups the numbers can only be obtained monthly; many of them come from the *Monthly Statements of Trade and Navigation*, issued about twelve days after the end of the month to which they relate, others are computed from the *Labour Gazette*, published about six days later and containing information up to the first of the month. The numbers are all to hand by about the 19th of the month and the results can be available as quickly as the printing press can handle the material after that day. The railway statistics are, however, some months in arrear. On the other hand prices and wages can be brought almost up to the day of going to press.

II. PRICES AND WAGES

For the general movement of prices the new Board of Trade Index is selected, as being the most widely based and the most scientific. It is described in detail in an article by Mr. A. W. Flux (of the Board of Trade) in the *Journal of the Royal Statistical Society*, March, 1921. It unites 150 series of wholesale prices; these are chosen so that the number in any group (e. g. wheat, which with bread and flour has seven entries) is in rough proportion to "the value of goods manufactured for consumption within the country or for export, together with the imports of goods which pass into consumption without undergoing a preliminary process of manufacture after importation," as indicated by the Census of Production of 1907. While the prices are principally those of unmanufactured commodities, some results of manufacture are included, e. g. yarns, cotton cloths, chemicals, leather, glass, and bricks. The *Statist* index number is quoted in two parts, food and materials.

For retail prices are used the Ministry of Labour's index of retail food prices and their index of cost of living, which includes food, rent, clothing, fuel, and miscellaneous items.

A new index number of wages is introduced, which follows the lines of the writer's "Prices and Wages in the United Kingdom, 1914–20." [1] The movements of the wages of eleven groups of operatives are estimated, starting from the basis laid down in that book and continued with the help of material furnished by the Ministry of Labour. For each group information is obtained for many districts, a relatively easy task now that wage changes are frequently the results of national agreements. The groups are bricklayers, bricklayers' labourers, engineers' fitters, engineers' labourers, printers' compositors, dock labourers, railway men, coal miners, agricultural labourers," cotton operatives, woollen and worsted operatives. These represent a wide range of districts, of methods of payment, conditions of work, and degrees of skill. They do not, however, include women except in the textile industries. The wages each month in each group are expressed as percentages of the pre-war rates, and the simple average of the group percentages is taken. The figures represent the average payment for the standard week, which since 1919 consists of perhaps one-tenth fewer hours than the pre-war week. In the case of piece rates it is assumed that as much work is done in an hour as in 1914. Various modifications would be necessary if it was desired to measure the change in average earnings of all workpeople, in particular the change in the relative numbers employed in different occupations would be involved; but the number as given is sufficient to establish the dates and to indicate the importance of the movements. With due caution this index may be used in conjunction with that of the cost of living, but the comparison is open to so many misconceptions that it has been thought inadvisable to put them together in a graph.

III. TRANSPORT

In this group are given the well-known monthly figures of the total tonnage of ships entering and clearing with cargoes; these numbers are not satisfactory, for the whole tonnage of a ship is necessarily counted whether she carries a full or light load. Two new indices of freights are quoted by the courtesy of Dr. Isserlis of the Chamber of Shipping of the United Kingdom which are likely to be of special interest.

New and detailed statistics of railway traffic are available since the institution of the Ministry of Transport. As a measure of the actual industry of the country, the amount of goods carried by rail is evidently of the first importance; the actual tonnage (rather than ton-mileage) is appropriate for this purpose, and is shown separately for fuel, for other minerals, and for general merchandise. Traffic receipts are also quoted. Unfortunately, the compilation of these statistics takes so long that they are some months in arrear, and they will not be of any use for forecasting; they are, however, descriptive of the recent past and will be useful for confirming the validity of impression derived from other sources.

---

[1] A. L. Bowley, Carnegie Endowment, *Economic and Social History of the World War.*

IV. OUTPUT AND TRADE

The series in this group are closely related to those of both Transport and Employment; together the three groups describe the condition of business. The statistics of production are very imperfect in the United Kingdom. There are adequate statistics of mining and of the production of pig-iron and of steel, and these are now available monthly. There are also agricultural statistics of considerable merit, but they are in their nature annual and are not relevant to the present problem. For manufacture we have only the solitary Census of Production of 1907. Now in the United Kingdom more than in any other country, except perhaps Belgium, manufacture is predominant in production and in employment. The output of manufacture is, however, almost impossible to measure by any statistical organization; on the one hand, the *value* of the output involves the very disturbing factor of prices, and on the other the more advanced the manufacturing processes the less is it possible to obtain a unit of *quantity*. We can measure steel by the ton and yarn by the pound, but it is almost ridiculous to measure machinery by weight, or to count up automobiles, and very misleading to measure woollen cloth by length, weight, or area. We could conceivably obtain satisfactory accounts of the consumption of raw material, but changes in consumption of material can only indicate for quite short periods changes in manufacture; in fact, there are only available statistics of imports which are imperfect without statistics of corresponding home production if the commodity is not (like cotton and jute) wholly foreign.

The most appropriate statistics available are the imports of raw material and the exports of manufactured goods; at present we state these only in terms of total value, but it may prove to be expedient to handle them in more detail. In order to eliminate the factor of price we ca present use the statistics of the dead weigh imports and exports, or (when they are availa the computed value at unchanged prices. utility of more detailed measurements on t lines will be the subject of further analysis; present we quote the weight of imports, weight of exports of (*a*) fuel, (*b*) others, the va of imports of materials and of exports of ma factures,[1] and the output of coal, pig iron, steel. Quarterly figures of tonnage of s building commenced are also stated, but rat as an index of the anticipation of requireme than as a measure of production.

V. EMPLOYMENT

The principal series here is the percentag numbers unemployed returned by Trade Uni These percentages have been found to for valuable index for several decades, while newer figures based on Unemployment In ance and on applications to the Labour changes have changed their significance each new act of legislation or modification administration, and cannot as yet be safely us Alongside this principal series we place reco of the numbers employed at the London do and the number of seamen shipped in Bri registered foreign-going vessels, rather as indi of industrial activity than as measures of ployment. A further index, which may be importance, is the record of the number of sh worked in the last complete week of each mo at a considerable number of iron and s works.

Finally statistics are given of the number persons relieved under the Poor law; th series may be expected to move rather later t those which indicate the state of business.

Enough has already been done, both in t enquiry and in past analyses of crises which g erally depended on annual series, to show h closely related are these various manifestati of the main tide of industry. In the new a changing conditions which the war has creat we hesitate to turn to past experience for interpretation of the present or the forecast of the future; for the moment we aim rather at describing the existing position. Yet we can say with some confidence that events move with a certain regularity; ups and downs do not succeed each other at random, but there is a movement upwards to a crisis; and this is succeeded by a continuous relapse to a minimum, and we may anticipate that when recovery begins it will be cumulative. The difficulty, of course, is to distinguish minor and temporary fluctuations from crucial maxima and minima, and for this purpose judgment based on the study of all the series together is better than any formula.

---

[1] The value of imports and exports under the remai categories and the total values are also tabulated for c pleteness of reference.

EXPLANATORY NOTES FOR CHARTS AND TABLES

Many of the series used show a strong seasonal movement; for example, imports of food and of raw materials increase in the autumn with the movement of the crops. To correct the misleading impression that the unadjusted figures might give, the seasonal variation has been calculated for those series marked X *on the basis of ten years or more pre-war experience — e.g., it is found that imports of raw materials were 7 per cent below the average annual value in June and 22 per cent above in December on the average of the years 1901–13. The percentages so found are applied to the recorded values to give companion columns in which the normal seasonal fluctuations are removed. In every case the original unadjusted figures are also given. The diagrams are drawn from the corrected values.*

Except for Section V (employment), the diagrams on page 147 above are drawn on the ratio scale, by which a given vertical fall or rise in any line (e.g. half an inch) indicates the same percentage or ratio decrease or increase, respectively. Where a line is straight through a period, the quantity is falling or rising by the same relative amount each month. The diagrams thus drawn give, it is believed, the correct impression of the relative importance of the movements.

The dates of maxima and minima and of equality are, of course, the same as on the natural scale.

The footnote numbers refer to table columns.

FOOTNOTES FOR TABLE I

1. Index numbers of prices of 20 industrial ordinary shares. Figures for May and June 1922 are for middle of month.— Prepared by J. Kitchin.
2. Index numbers of prices of 8 speculative ordinary shares. Figure for May 1922 for middle of month. — Prepared by J. Kitchin.
3. Index numbers of yield on 4 fixed interest stocks, on last day of month as percentage of 1913. Figure for May 1922 for middle of month. — Prepared by J. Kitchin.
4. New capital issues during month in U. K., for U. K. excluding government loans, etc. (see L. J. C. and M. Bank's *Monthly Review*). — Compiled by the London Joint City and Midland Bank, Ltd.
5. Total of town clearings of London bankers' clearing houses for three weeks covering two stock exchange settlement days, consols settlement day, and fourth of following month.
6. Preceding series corrected for seasonal influence.
7. Total of country clearings of London bankers' clearing house for four weeks ending approximately at end of month.
8. Preceding series corrected for seasonal influence.
9. Total of clearings for Birmingham, Bristol, Liverpool, Manchester, Newcastle, for four weekly periods as above.
10. Preceding series corrected for seasonal influence.
11. Average weekly cable rate for week ending 11th–17th of month. — *Times*.
12. Deposits, other than public, 11th–17th of month.
13. Bank notes and currency notes in circulation 11th–17th of month.
14. Average deposits for the month of nine clearing banks (i. e. excluding the National Bank, Ltd.). — *Monthly Review* of the London Joint City and Midland Bank.
15. Average advances of nine clearing banks. — *Monthly Review* of the London Joint City and Midland Bank.
16. Average of bank rate, bankers' deposit rate, three-months bill rate, and day-to-day rate for week ending 15th of month, or latest available date, expressed as percentage of 1913 average.

FOOTNOTES FOR TABLE II

1. Average (cash) price of bar silver for week ending 15th of month, or latest figures available. — *Economist*.
2. For each completed month. Geometric mean of wholesale prices (averages for month) of 150 commodities as percentage of 1913 average. New index after December 1919. In data marked † coal prices assumed same as March 1921. — *Board of Trade Journal*. Approximate estimate from other sources is made for the middle of the most recent month.
3. Average wholesale prices of 19 foodstuffs on last day of month, as percentage of average for 1913. — *Statist*.
4. Preceding series corrected for seasonal influence.
5. As above in 3, for 26 raw materials.
6. Preceding series corrected for seasonal influence.
7. Ministry of Labour's index showing movement in cost of maintaining unchanged the standard of living prevalent in working-class households before the war. For 1st of month, but placed against previous month — e. g., reading for March 1 is shown against February — to facilitate comparison with Statist index. — Ministry of Labour.
8. As above for food only.
9. Average of index numbers of rates of wages for normal week of (*a*) bricklayers and labourers, (*b*) engineering fitters and labourers, (*c*) compositors, (*d*) dock labourers, (*e*) railwaymen, (*f*) woollen-workers, (*g*) cotton-workers, (*h*) miners, and (*i*) agricultural labourers. In general includes changes reported up to end of month. From March 1922 includes those reported by the middle of month. — Prepared by Professor Bowley.

I. FINANCE

	Stocks and Shares			New capital issues	Bank Clearings						New York Exchange (cable)	Bank of England		Nine Principal Banks		Short money index
	Per cent of pre-war level				London Bankers' Clearing House				Provincial							
					Town		Country		5 towns							
	Industrial (price)	Speculative (price)	Fixed int. (yield)									Private deposits	Bank and currency notes	Deposits	Advances	
				£ Mn.	£ Mn.	x	£ Mn.	x	£ Mn.	x	$	£ Mn.	£ Mn.	£ Mn.	£ Mn.	%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1919																
January	154	162	126	14.7	1220	*1160*	239	*224*	129	121	4.776	125	382	Not available		93
February	156	166	127	9.6	1090	1030	227	224	133	119	4.765	120	381			95
March	155	169	130	11.0	1140	*1085*	232	*239*	127	121	4.764	126	393			91
April	155	182	130	5.0	1050	*1020*	220	*223*	115	116	4.658	117	410			93
May	166	196	130	15.6	1220	*1220*	262	*260*	127	131	4.673	112	423			93
June	165	202	135	13.9	1340	*1270*	247	*254*	141	145	4.630	128	425			88
July	165	225	139	21.9	1520	*1600*	304	*286*	154	151	4.496	113	420			87
August	173	220	143	14.1	1340	*1530*	260	*273*	145	164	4.314	100	418			95
September	170	223	144	6.7	1450	*1510*	254	*276*	156	164	4.169	89	412			96
October	183	261	141	12.3	1580	*1640*	288	*268*	176	174	4.176	100	420			103
November	187	258	144	26.3	1750	*1810*	301	*292*	182	184	4.126	103	423			130
December	194	268	145	37.1	1690	*1620*	316	*336*	218	220	3.752	138	429			119
1920																
January	214	295	145	30.1	1990	*1900*	336	*314*	229	213	3.722	127	423			123
February	205	269	148	31.9	2070	*1960*	329	*323*	259	231	3.395	132	413			130
March	199	250	159	65.1	1950	*1850*	329	*339*	248	237	3.694	127	426			123
April	189	235	160	44.7	2050	*1990*	317	*320*	221	222	3.957	123	440			135
May	175	222	157	19.1	1940	*1940*	322	*320*	213	220	3.830	99	449			151
June	162	221	158	21.3	1940	*1840*	307	*316*	208	214	3.928	133	458			147
July	160	219	155	41.7	1780	*1880*	324	*305*	205	202	3.953	120	468			151
August	152	222	158	6.5	1810	*2060*	301	*317*	190	215	3.645	124	464			147
September	155	222	159	18.4	1930	*2000*	301	*326*	192	202	3.533	123	457			154
October	156	218	162	24.2	1880	*1940*	325	*303*	186	185	3.486	124	462			151
November	138	182	163	23.4	1860	*1920*	301	*292*	172	174	3.372	113	460			154
December	129	176	161	4.8	1780	*1710*	271	*288*	142	143	3.453	126	469			151
1921																
January	125	170	156	11.3	1960	*1870*	289	*270*	153	142	3.736	123	461	1810	845	151
February	115	158	155	7.0	1790	*1700*	270	*265*	134	120	3.882	114	444	1754	844	162
March	119	173	154	18.0	1660	*1580*	247	*254*	126	121	3.899	107	444	1715	863	154
April	123	186	151	4.6	1740	*1690*	256	*259*	108	109	3.920	114	449	1710	852	151
May	121	166	150	6.5	1740	*1740*	219	*217*	97	101	3.998	145	445	1729	840	135
June	122	166	152	15.2	1790	*1700*	206	*212*	94	97	3.763	131	434	1768	814	139
July	117	156	152	5.7	1730	*1830*	216	*203*	99	98	3.634	135	432	1785	812	123
August	118	148	152	1.5	1570	*1790*	205	*215*	103	117	3.667	114	433	1764	799	115
September	113	141	152	2.8	1680	*1740*	209	*227*	118	124	3.713	130	422	1771	786	101
October	103	139	152	19.3	1760	*1820*	226	*210*	118	117	3.872	135	417	1802	787	106
November	105	146	150	4.9	1910	*1970*	223	*216*	115	116	3.942	106	415	1793	774	99
December	111	152	140	3.4	1750	*1680*	209	*222*	104	105	4.189	141	422	1818	762	90
1922																
January	112	141	139	27.4	2120	*2020*	240	225	112	104	4.228	130	416	1826	752	90
February	118	146	131	6.6	2100	*2000*	220	*217*	117	105	4.356	137	403	1802	748	85
March	119	149	128	9.6	2180	*2070*	221	*228*	117	112	4.346	116	401	1747	746	86
April	*130*	*162*	*124*	5.9	*2200*	*2140*	208	*210*	111	112	4.417	118	407	1737	745	70
May	132	163	123	...	....	....	...	...	...	...	4.444	126	399	....	...	64
June	135	...	...	...	....	....	...	...	...	...	....	...	...	....	...	62

See explanation and footnotes on p. 151.

	II. PRICES AND WAGES									III. TRANSPORT									
	Price of bar silver (cash)	Wholesale Prices					Retail Prices		Index numbers of rates of wages	Shipping — Tonnage of ships (with cargoes)				Railway Freight Traffic				Shipping Freights	
		Per cent of pre-war level					Per cent of pre-war level			Entering British ports		Leaving British ports		Tonnage carried			Receipts	Time charter rate	Fr'ght Index
		Board of Trade index	Statist (Sauerbeck) indices				M. of Lab.							General	Fuel	Other minerals		Geo-met'c average for 1920 =100	Geo-met'c average for 1920 =100
	d. per oz.		Food	x	Raw materials	x	Cost of living	Food		10,000 tons	x	10,000 tons	x	10,000 tons	10,000 tons	10,000 tons	£ Mn.		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1919																			
January ...	...	246	234	*234*	218	*217*	220	230	206	183	*198*	230	*244*	Not available			....	..	..
February ..	...	247	235	*234*	212	*211*	215	220	207	181	*217*	237	*274*				....	..	..
March	...	253	223	*221*	213	*213*	210	213	207	194	*207*	274	*278*				....	..	..
April	48.9	251	223	*220*	213	*212*	205	207	207	220	*229*	267	*270*				....	..	..
May	55.5	236	226	*224*	230	*230*	205	204	209	237	*237*	332	*306*				....	..	..
June	54.1	238	229	*226*	239	*241*	207	209	210	241	*229*	285	*279*				....	..	..
July	53.4	242	231	*229*	239	*240*	215	217	216	281	*252*	293	*278*				....	..	..
August	58.6	257	242	*244*	255	*255*	215	216	216	279	*256*	264	*254*				....	..	..
September .	61.0	265	244	*247*	257	*256*	220	222	218	284	*271*	306	*297*				....	..	..
October ...	63.1	278	253	*256*	270	*269*	225	231	218	288	*271*	313	*296*				....	..	..
November .	68.6	289	258	*262*	280	*279*	225	234	220	268	*272*	311	*316*				....	..	..
December .	77.1	297	260	*262*	287	*284*	225	236	226	300	*302*	333	*349*				....	..	..
1920																			
January ...	80.5	303	265	*265*	302	*301*	230	235	229	258	*279*	325	*345*	654	1653	523	8.30	149	123
February ..	87.0	317	286	*285*	318	*318*	230	233	229	242	*291*	310	*359*	611	1539	501	9.54	149	138
March	72.1	326	300	*297*	312	*312*	232	235	234	295	*315*	317	*322*	684	1711	594	11.08	134	141
April	69.0	332	315	*310*	311	*310*	241	246	235	275	*286*	267	*270*	584	1462	559	9.85	120	127
May	59.4	333	318	*314*	298	*298*	250	255	253	305	*305*	292	*269*	587	1532	597	9.81	105	121
June	47.2	330	325	*321*	285	*289*	252	258	261	311	*295*	309	*303*	585	1570	616	9.78	112	112
July	53.1	324	325	*321*	283	*285*	255	262	264	331	*293*	338	*320*	593	1595	621	10.19	94	95
August	59.1	320	319	*322*	285	*285*	261	267	266	362	*332*	297	*286*	571	1456	569	9.53	81	84
September .	59.5	318	308	*311*	283	*282*	264	270	270	326	*312*	302	*294*	622	1574	597	13.69	78	84
October ...	54.6	309	302	*306*	269	*268*	276	291	270	326	*306*	267	*253*	588	850	512	11.49	84	93
November .	53.5	293	291	*297*	245	*244*	269	282	274	311	*316*	315	*320*	565	1402	508	11.73	81	80
December .	40.2	269	253	*255*	237	*235*	265	278	276	310	*312*	328	*344*	527	1635	529	11.73	60	58
1921																			
January ...	40.0	251	251	*251*	219	*218*	251	263	277	293	*316*	262	*277*	493	1412	474	10.96	60	46
February ..	36.0	230	234	*233*	204	*203*	241	249	276	255	*306*	261	*303*	465	1253	412	9.97	42	38
March	32.4	215	232	*229*	195	*195*	233	238	275	286	*305*	294	*299*	496	1269	390	10.41	40	37
April	34.7	209†	225	*222*	184	*183*	228	232	(271)	263	*273*	189	*191*	436	132	266	5.54	36	39
May	34.6	205†	211	*208*	178	*178*	219	218	(269)	308	*308*	166	*153*	351	114	191	5.38	37	40
June	35.4	202†	207	*204*	168	*170*	219	220	(264)	333	*316*	199	*195*	341	155	190	5.81	37	43
July	37.4	199	206	*203*	174	*175*	222	226	253	337	*301*	281	*265*	380	1155	225	8.91	35	43
August	37.4	194	207	*209*	165	*164*	220	225	243	344	*315*	378	*364*	467	1387	308	10.66	35	40
September .	39.2	191	190	*192*	168	*168*	210	210	237	340	*324*	410	*399*	485	1377	341	10.34	34	34
October ...	42.5	184	168	*170*	159	*159*	203	200	233	342	*322*	406	*384*	477	1424	353	10.28	30	30
November .	38.5	176	168	*171*	156	*155*	199	195	227	313	*318*	394	*401*	482	1518	344	10.58	30	29
December .	35.2	171	160	*162*	155	*154*	192	185	223	307	*308*	400	*420*	436	1538	314	9.77	30	33
1922																			
January ...	35.4	167	162	*162*	152	*151*	188	179	217	291	*314*	392	*416*	444	1508	299	9.38	30	33
February ..	34.3	165	166	*166*	149	*149*	186	177	214	257	*308*	390	*452*	444	1555	336	9.66	30	34
March	33.3	163	174	*172*	146	*146*	182	173	214	324	*348*	481	*489*	..	...	..	....	30	33
April	33.5	163	183	*181*	143	*142*	181	172	208	331	*345*	481	*487*	..	...	..	....	28	31
May	35.7	164	..	..	..	..	..	..	204	..	..	..	..	..	...	..	....	..	..

See explanation and footnotes on pp. 151, 156.

IV. OUTPUT AND TRADE

	Imports (values)								Exports (values)							
	Food, drink, and tobacco		Raw materials		Manufactures		Total		Food, drink, and tobacco		Raw materials		Manufactures		Total	
	£ Mn.	x	£ Mn.	x	£ Mn.	x	£ Mn.	x	£ Mn.	x	£ Mn.	x	£ Mn.	x	£ Mn.	x
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16
1919																
January	55.3	56.3	48.5	43.1	29.9	30.2	134.5	130.4	1.4	1.6	4.8	4.9	40.2	38.6	47.3	46
February	45.4	53.5	38.7	36.8	22.3	23.0	106.7	113.6	1.3	1.6	5.6	5.8	39.2	40.6	46.9	48
March	48.6	49.5	33.6	33.1	23.4	21.3	105.8	104.1	1.8	2.1	8.0	8.1	42.4	40.8	53.1	51
April	53.7	56.5	40.0	40.6	18.1	17.8	112.1	115.2	2.9	3.5	6.6	7.1	48.3	51.4	58.5	62
May	63.4	65.8	49.1	52.3	22.6	22.3	135.6	140.9	3.3	3.8	9.9	9.4	51.0	51.2	64.3	64
June	59.6	60.5	43.9	46.9	19.3	19.8	122.9	127.3	2.7	3.1	9.7	10.3	51.2	54.8	64.6	69
July	73.2	72.2	54.3	62.8	25.0	25.0	153.1	160.6	2.6	2.4	11.0	10.7	51.0	48.9	65.3	62
August	70.8	69.9	54.9	69.0	22.5	22.9	148.7	162.3	2.6	2.4	8.4	8.5	62.8	60.3	74.8	72
September	62.9	61.2	57.1	72.9	28.3	28.6	148.6	163.0	2.9	2.4	11.0	10.8	51.7	51.1	66.5	65
October	66.0	60.3	57.1	56.0	30.2	29.6	153.5	146.1	3.8	3.0	11.6	10.7	62.6	59.3	79.1	74
November	62.3	57.8	57.4	69.2	23.6	24.3	143.5	131.5	4.3	3.3	11.8	11.6	69.8	70.3	87.1	86.
December	65.8	62.1	72.8	59.5	30.9	31.8	169.6	153.5	4.3	4.3	12.9	12.9	72.0	74.6	90.9	93.
1920																
January	73.2	74.6	78.1	69.4	31.5	31.8	183.3	176.3	4.8	5.7	16.7	16.9	83.1	79.7	105.9	103.
February	57.6	67.7	79.6	75.8	33.0	34.2	170.4	177.9	3.9	5.1	13.8	14.5	66.7	69.1	86.0	90.
March	61.8	63.0	76.5	75.5	38.2	34.7	176.6	173.3	4.3	4.6	14.5	14.6	83.4	80.2	103.7	100.
April	57.4	60.4	71.6	72.9	38.1	37.5	167.1	170.8	4.0	4.8	12.2	13.1	88.7	94.4	106.3	113.
May	65.0	67.4	60.5	64.4	40.6	40.1	166.4	172.2	4.0	4.6	13.2	12.6	100.7	103.2	119.3	121.
June	67.3	68.5	57.9	61.9	44.7	45.9	170.3	176.7	4.3	4.8	11.4	12.1	99.1	106.1	116.4	124.
July	69.4	68.3	51.9	60.0	41.4	41.4	166.1	173.1	4.5	4.2	12.6	12.2	119.0	114.1	137.5	131.
August	61.9	61.1	51.3	64.5	40.0	40.7	153.3	166.4	3.5	3.2	10.5	10.5	99.6	95.7	114.9	110.
September	67.3	65.5	44.6	56.9	40.6	40.9	152.8	165.6	4.3	3.7	9.5	9.4	102.2	101.1	117.5	115.
October	68.9	62.9	44.3	43.5	36.3	35.5	149.6	142.0	4.7	3.7	9.6	8.9	95.7	90.6	112.3	105.
November	61.5	57.1	46.6	40.0	36.0	37.0	144.2	134.2	4.7	3.6	9.4	9.3	103.7	104.5	119.4	119.
December	59.3	56.0	48.6	39.7	34.6	35.5	142.7	131.4	3.8	3.8	12.3	12.3	78.8	81.7	96.6	99.
1921																
January	49.2	50.0	37.0	32.9	30.5	30.8	117.0	114.0	3.9	4.6	7.7	7.8	79.7	76.5	92.8	90.
February	47.8	56.2	25.5	24.3	23.4	24.2	97.0	105.0	3.1	3.9	5.9	6.1	58.2	60.3	68.2	71.
March	50.9	51.9	17.7	17.5	24.9	22.7	93.7	92.3	2.9	3.4	5.8	5.9	57.0	54.8	66.8	65.
April	52.9	55.7	16.5	16.9	20.4	20.1	90.0	92.9	3.7	4.5	2.9	3.1	52.0	55.4	59.9	64.
May	50.1	52.0	16.7	17.8	19.3	19.1	86.3	89.1	2.1	2.4	1.4	1.4	38.7	39.6	43.9	45.
June	51.9	52.7	18.4	19.7	17.6	18.1	88.2	90.8	2.4	2.7	1.1	1.2	33.7	36.1	38.2	41.
July	42.1	42.2	20.2	23.4	18.0	18.0	80.8	84.1	2.7	2.5	2.8	2.7	36.7	35.2	43.2	41.
August	50.6	49.9	19.6	24.6	18.2	18.5	88.6	93.2	3.1	2.8	7.1	7.1	39.9	38.3	51.3	49.
September	48.4	47.1	20.5	26.2	17.9	18.0	87.1	91.6	3.3	2.8	6.8	6.7	44.0	43.5	55.2	54.
October	44.5	40.6	21.3	20.9	18.7	18.3	84.7	80.0	3.5	2.7	7.4	6.8	50.3	47.6	62.3	58.
November	41.2	38.3	29.9	25.7	17.9	18.4	89.3	82.7	3.6	2.8	7.0	6.9	51.1	51.5	62.9	62.
December	39.1	36.9	27.8	22.7	18.3	18.8	85.3	78.5	3.2	3.2	7.4	7.4	47.4	49.1	59.4	61.
1922																
January	34.0	34.6	24.6	21.8	17.7	17.9	76.5	74.5	2.9	3.4	7.0	7.1	51.8	49.7	63.1	61.
February	32.3	37.9	20.2	19.2	16.6	17.1	69.4	74.0	2.8	3.5	6.9	7.2	48.0	49.7	58.3	61.
March	45.3	46.1	22.1	21.8	20.3	18.5	87.9	86.6	3.3	3.8	8.5	8.5	51.8	49.8	64.6	63.
April	40.1	42.2	21.4	21.8	19.0	18.7	80.7	82.9	3.0	3.7	7.4	7.9	44.3	47.2	55.5	59.
May	...	...	...	...	...	...	....	....	...	...	...	...	....	46.2	....	...

See explanation and footnotes on pp. 151, 156.

	IV. OUTPUT AND TRADE — *Continued*							V. EMPLOYMENT, ETC.									
	ESTIMATED WEIGHT OF			OUTPUT OF			SHIP BUILDING	Members of trade unions unemployed	IRON AND STEEL TRADES, CHANGES IN SHIFTS WORKED		DOCK LABOUR		SEAMEN		PAUPERISM		
	Imports	Exports		Coal	Pig iron	Steel	Tonnage commenced quarterly		Each month	Since January 1919	Average daily nos. employed		No. shipped during month		Nos. relieved on one day		
		Fuel	Other												Indoor		Outdoor
	Tons Mn.	Tons Mn.	Tons Mn.	Tons Mn.	Tons 1,000	Tons 1,000	Tons 1,000	%			00	x	00	x	000	x	000
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1919																	
January ...	3.11	...	...	...	661	718	425	2.4	− 1.5	....	142	*137*	321	*338*	102	*97*	111
February ..	2.30	...	...	...	626	734		2.8	+ 1.1	+ 1.1	149	*153*	253	*300*	104	*98*	112
March	2.34	...	.78	...	691	758		2.9	+ 2.8	+ 3.9	165	*166*	323	*334*	102	*98*	114
April	2.45	3.47	.63	...	647	668	660	2.7	+ 0.7	+ 4.6	173	*176*	309	*310*	100	*99*	112
May	3.23	4.09	.71	...	671	755		2.1	+ 3.5	+ 8.3	199	*196*	355	*326*	98	*98*	112
June	2.91	3.50	.62	17.4	658	631		1.7	− 0.1	+ 8.2	208	*215*	329	*321*	97	*102*	113
July	3.68	3.68	.56	16.0	641	618	714	2.0	−15.4	− 8.5	212	*214*	345	*299*	98	*105*	114
August	3.95	2.47	.66	14.0	521	474		2.2	+11.5	+ 2.0	214	*222*	340	*317*	99	*103*	115
September .	3.72	2.96	.61	17.9	581	718		1.6	+ 3.0	+ 5.1	225	*230*	390	*358*	99	*104*	116
October ...	4.13	3.02	.68	18.2	475	433	604	2.6	− 5.5	− 2.7	221	*219*	371	*356*	101	*103*	117
November .	3.48	3.03	.77	19.0	624	695		2.9	+ 5.1	+ 4.4	229	*220*	312	*334*	103	*102*	120
December .	3.47	3.31	.79	18.0	632	692		3.2	+ 2.8	+ 7.3	242	*227*	329	*383*	104	*100*	122
1920																	
January ...	3.31	3.80	.92	19.2	665	754	708	2.9	− 0.4	+ 6.8	241	*232*	352	*371*	107	*102*	123
February ..	2.89	3.00	.75	19.4	645	798		1.6	+ 7.5	+14.8	242	*249*	335	*398*	108	*102*	125
March	3.55	2.41	1.35	19.5	699	840		1.1	+ 2.1	+17.2	232	*235*	377	*390*	108	*104*	126
April	3.68	2.25	.88	17.7	671	794	589	0.9	+ 0.1	+17.3	226	*230*	322	*323*	108	*107*	127
May	3.88	2.36	1.00	17.6	739	846		1.1	− 0.9	+16.2	220	*217*	335	*308*	106	*106*	128
June	4.15	2.27	.87	19.0	726	845		1.2	+ 1.9	+18.4	206	*213*	427	*418*	106	*110*	129
July	4.20	2.49	1.03	18.2	751	790	594	1.4	+ 0.4	+18.9	202	*204*	429	*371*	105	*113*	132
August	4.30	2.21	.86	17.0	752	709		1.6	− 0.8	+17.9	188	*196*	405	*378*	105	*111*	133
September .	4.17	1.84	.85	18.8	741	885		2.2	+ 0.8	+18.8	196	*200*	425	*400*	106	*111*	134
October ...	4.08	1.67	.90	9.3	533	544	506	5.3	−36.7	+24.8	198	*196*	349	*335*	109	*111*	140
November .	3.11	1.55	.89	15.9	403	505		3.7	+43.6	+ 8.0	194	*186*	359	*423*	111	*110*	160
December .	3.72	2.61	.74	18.3	682	747		6.0	− 1.3	+ 6.6	193	*182*	329	*383*	113	*109*	178
1921																	
January ...	3.38	1.83	.73	18.5	642	493	393	6.9	−13.7	− 8.0	193	*186*	318	*334*	116	*110*	203
February ..	2.57	1.87	.58	17.4	464	483		8.5	−15.3	−22.1	187	*192*	279	*332*	117	*111*	214
March	2.70	2.11	.55	16.4	385	358		10.0	−12.5	−31.8	173	*175*	335	*346*	116	*112*	225
April	2.67	.66	.62	Strike	60	71	69	17.6*	−49.2	−65.3	170	*174*	259	*260*	117	*112*	276
May	2.89	.03	.47		14	6		22.2*	−58.8	−85.7	171	*169*	294	*270*	117	*113*	362
June	4.15	.00	.33		0	2		23.1*	− 7.4	−86.8	176	*182*	332	*324*	116	*121*	455
July	4.05	.86	.36	15.2	10	117	51	16.7	?	−54.3	160	*162*	384	*333*	116	*124*	427
August	3.39	3.30	.47	16.6	94	434		16.5	+17.9	−46.1	152	*158*	391	*365*	117	*123*	429
September .	3.52	3.59	.54	16.5	158	429		14.8	− 0.1	−46.1	155	*159*	407	*374*	120	*125*	599
October ...	3.47	3.64	.66	17.0	235	405	55	15.6	− 4.5	−48.5	168	*167*	386	*371*	121	*124*	831
November .	3.34	3.83	.72	17.9	272	443		15.9	− 6.4	−51.8	172	*165*	365	*391*	123	*121*	784
December .	3.08	4.54	.70	17.9	275	381		16.5	− 3.3	−53.4	173	*163*	305	*355*	125	*120*	732
1922																	
January ...	...	14.03	...	17.7	288	328	51	16.8	− 7.0	−56.7	172	*166*	343	*362*	127	*121*	792
February ..	...		...	19.8	300	415		16.3	+ 9.1	−52.7	170	*174*	315	*374*	127	*120*	800
March	...		...	19.7	390	549		16.3	− 6.7	−55.9	166	*168*	378	*361*	125	*120*	828
April	...	...	...	18.1	394	404	....	17.0	− 5.6	−58.4	168	*171*	348	*350*	123	*122*	946
May	...	...	...	...	...	...	....	...	....	....	...	...	..	..	..	..	..

See explanation and footnotes on pp. 151, 156.

FOOTNOTES FOR TABLE III

1. Tonnage of British and foreign vessels entering British ports with cargoes during month. — Board of Trade *Monthly Accounts of Trade and Navigation.*
2. Preceding series corrected for seasonal influence.
3. Tonnage of British and foreign vessels leaving British ports with cargoes during month. — Board of Trade *Monthly Accounts of Trade and Navigation.*
4. Preceding series corrected for seasonal influence.
5. Estimated tonnage of general freight carried on the railways of Great Britain during the month excluding free-hauled. (Controlled railways before August 1921.) Provisional figure for February 1922.—Ministry of Transport.
6. As above, for fuel only.
7. As above, for other minerals only.
8. Total monthly receipts for goods traffic, excluding cost of collection and delivery. — Ministry of transport.
9. Chamber of shipping index numbers as published by the *Statist.* — Prepared by Dr. Isserlis.
10. As above.

FOOTNOTES FOR TABLE IV

1, 3, 5, 7. Values of imports (c. i. f.) into U. K. for food and drink and tobacco (1), for raw materials (3), for manufactures (5), and for total including miscellaneous (7). — Board of Trade *Monthly Accounts of Trade.*

2, 4, 6, 8. Above series corrected for seasonal influence.

9, 11, 13, 15. Values of exports (f. o. b.) for food and drink and tobacco (9), for raw materials (11), for manufactures (13), and for total including miscellaneous (15). — Board of Trade *Monthly Accounts of Trade.*

10, 12, 14, 16. Above series corrected for seasonal influence.

17, 18, 19. Estimated weights. — Board of Trade *Journal.*

20. Total for 4 weeks ending approximately at end of month. — Board of Trade *Journal.*
21. Monthly output of pig iron. — National Federation of Iron and Steel Manufacturers.
22. Monthly output of steel ingots and castings. — National Federation of Iron and Steel Manufacturers.
23. Tonnage of ships over 100 tons (excluding warships) commenced during the quarter.— *Lloyd's Register of Shipping.*

FOOTNOTES FOR TABLE V

1. End of month figures. In data marked * coal mining excluded. — *Labour Gazette.*
2. Month-to-month percentage changes in number of shifts worked. — *Labour Gazette.*
3. As above.
4. Average daily number of labourers employed in London docks. — *Labour Gazette.*
5. Preceding series corrected for seasonal influence.
6. Number of seamen shipped in British-registered foreign-going vessels at principal ports during the month (separate engagements, not separate individuals). — *Labour Gazette.*
7. Preceding series corrected for seasonal influence.
8. Number of persons in receipt of indoor relief "on one day" in "selected urban areas of Great Britain." — *Labour Gazette.*
9. Preceding series corrected for seasonal influence.
10. As above in 8.